

**Faculty of Engineering, Chemical Engineering Department Curriculum
(Intern Engineering Education- Plan A)**

1. SEMESTER COURSE PLAN		L	U	C	ECTS	
CHE-1001	Mathematics I	2	2	3	5	Mandatory
CHE-1003	Physics I	2	2	3	5	Mandatory
CHE-1005	General Chemistry I	2	2	3	5	Mandatory
CHE-1007	Introduction to Chemical Engineering	2	0	2	4	Mandatory
ATA-1001	Principles of Atatürk and History of Revolution I	2	0	2	1	Mandatory
TDI-1001	Turkish Language I	2	0	2	1	Mandatory
YDI-1001	English I	2	0	2	2	Mandatory
CHE-1009	Introduction to Information Technologies and Applications	2	2	0	3	Mandatory
CHE-1017	General Chemistry Laboratory	0	2	1	3	Mandatory
	Elective	2	0	0	1	Mandatory
CHE-1013	Emergency First Aid I	2	0	0	1	Elective
CHE-1015	Mobile Marketing	2	0	0	1	Elective
CHE-1019	Career Planning	2	0	0	1	Elective
	TOTAL CREDITS FOR SEMESTER	18	10	18	30	
3. SEMESTER COURSE PLAN		L	U	K	ECTS	
CHE-2001	Differential Equation	2	2	3	4	Mandatory
CHE-2003	Analytical Chemistry	2	2	3	5	Mandatory
CHE-2005	Physical Chemistry	2	2	3	4	Mandatory
CHE-2007	Instrumental Analysis	2	2	3	4	Mandatory
CHE-2009	Occupational Health and Safety I	2	0	2	2	Mandatory
CHE-2011	Technical English	2	0	2	3	Mandatory
CHE-2013	Instrumental Analysis Laboratory	0	2	1	4	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
CHE-2017	Report Writing Technique	2	0	2	2	Elective
CHE-2019	Statistics and Probability	2	0	2	2	Elective
CHE-2021	Quality Management	2	0	2	2	Elective
CHE-2023	Business Law	2	0	2	2	Elective
CHE-2025	Workplace Risk Analysis	2	0	2	2	Elective
	TOTAL CREDITS FOR SEMESTER	16	10	21	30	
5. SEMESTER COURSE PLAN		L	U	K	ECTS	
CHE-3001	Thermodynamic I	2	2	3	5	Mandatory
CHE-3003	Chemical Reaction Engineering	2	2	3	5	Mandatory
CHE-3005	Heat and Mass Transfer	4	2	5	8	Mandatory
CHE-3007	Mathematical Modeling in Chemical Engineering	2	2	3	4	Mandatory
BLM-3009	Computer Modeling and Simulation Laboratory	2	0	2	2	Mandatory
CHE-3011	Internship I	0	0	0	2	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
CHE-3013	Ceramic Materials	2	0	2	2	Elective
CHE-3015	Composite Materials	2	0	2	2	Elective
CHE-3017	Polymer Science	2	0	2	2	Elective
CHE-3019	Wastewater Treatment Technology	2	0	2	2	Elective
CHE-3021	Adsorption	2	0	2	2	Elective
	TOTAL CREDITS FOR SEMESTER	16	8	20	30	
7. SEMESTER COURSE PLAN		L	U	K	ECTS	
CHE-4001	Process Design	3	2	4	6	Mandatory
CHE-4003	Process Control	3	0	3	4	Mandatory
CHE-4005	Chemical Engineering Applications	0	4	2	5	Mandatory
CHE-4007	Chemical Technologies	3	0	3	4	Mandatory
CHE-4009	Graduation Project	0	6	3	7	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
CHE-4013	Textile Chemistry	2	0	2	2	Elective
CHE-4015	Colloid Chemistry	2	0	2	2	Elective
CHE-4019	Extractive Metallurgy and Applications	2	0	2	2	Elective
CHE-4021	Energy Management	2	0	2	2	Elective
CHE-4023	English Written and Oral Communication	2	0	3	5	Elective
CHE-4025	Intellectual and Industrial Property Rights	2	0	3	5	Elective
	TOTAL CREDITS FOR SEMESTER	13	12	19	30	

2. SEMESTER COURSE PLAN		L	U	C	ECTS	
CHE-1002	Mathematics II	2	2	3	5	Mandatory
CHE-1004	Physics II	2	2	3	5	Mandatory
CHE-1006	General Chemistry II	2	2	3	5	Mandatory
CHE-1008	Computer Based Technical Drawing Laboratory	2	2	3	6	Mandatory
ATA-1002	Principles of Atatürk and History of Revolution II	2	0	2	1	Mandatory
TDI-1002	Turkish Language II	2	0	2	1	Mandatory
YDI-1002	English II	2	0	2	2	Mandatory
CHE-1016	General Physics Laboratory	0	2	1	4	Mandatory
	Elective	2	0	0	1	Mandatory
CHE-1012	Emergency First Aid II	2	0	0	1	Elective
CHE-1024	Advertising Management	2	0	0	1	Elective
CHE-1030	Corporate Culture and Value Systems in Engineering	2	0	0	1	Elective
	TOTAL CREDITS FOR SEMESTER	16	10	19	30	
4. SEMESTER COURSE PLAN		L	U	K	ECTS	
CHE-2002	Mass and Energy Balance	4	0	4	5	Mandatory
CHE-2004	Analytical Chemistry Laboratory	0	2	1	2	Mandatory
CHE-2006	Fluid Mechanics	2	2	3	4	Mandatory
CHE-2008	Inorganic Chemistry	2	2	3	4	Mandatory
CHE-2010	Occupational Health and Safety II	2	0	2	2	Mandatory
CHE-2012	Organic Chemistry	2	2	3	4	Mandatory
CHE-2014	Inorganic Chemistry and Organic Chemistry Laboratory	0	4	2	3	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
CHE-2016	Nanotechnology	2	0	2	2	Elective
CHE-2028	Numerical Analysis	2	0	2	2	Elective
CHE-2018	Renewable Energy	2	0	2	2	Elective
CHE-2020	Food Technology	2	0	2	2	Elective
CHE-2022	Petroleum Chemistry	2	0	2	2	Elective
CHE-2024	Boron Technology	2	0	2	2	Elective
CHE-2026	Business and Entrepreneurship	2	0	2	2	Elective
	TOTAL CREDITS FOR SEMESTER	18	12	24	30	
6. SEMESTER COURSE PLAN		L	U	K	ECTS	
CHE-3002	Thermodynamic II	2	2	3	5	Mandatory
CHE-3004	Reactor Design	2	2	3	5	Mandatory
CHE-3006	Device Design	3	2	4	6	Mandatory
CHE-3008	Basic Operations	4	2	4	6	Mandatory
CHE-3010	Engineering Economics	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
CHE-3012	Engineering Mechanics	2	0	2	2	Elective
	Paper Industry	2	0	2	2	Elective
CHE-3016	Fuel Technology	2	0	2	2	Elective
CHE-3018	Polymer Chemistry and Technology	2	0	2	2	Elective
CHE-3020	Electrochemical Technologies	2	0	2	2	Elective
CHE-3022	Management Planning and Efficiency in Engineering	2	0	2	2	Elective
	TOTAL CREDITS FOR SEMESTER	19	8	22	30	
8. SEMESTER COURSE PLAN		L	U	K	ECTS	
	Elective	2	2	3	7	Mandatory
	Elective	2	2	3	6	Mandatory
	Elective	3	0	3	5	Mandatory
	Elective	3	0	3	5	Mandatory
	Elective	3	0	3	5	Mandatory
CHE-4030	Internship II	0	0	0	3	Mandatory
CHE-4006	Membrane and Membrane Process	3	0	3	5	Elective
CHE-4028	Introduction to Biotechnology	2	2	3	6	Elective
CHE-4022	Material Science	3	0	3	5	Elective
CHE-4024	Hydrogen Energy and Fuel Cell Technology	3	0	3	5	Elective
CHE-4026	Environmental Technology and Design	2	2	3	6	Elective
	TOTAL CREDITS FOR SEMESTER	13	4	15	30	
ALL SEMESTER TOTAL CREDITS		128	74	158	240	